



Chinese Management Studies

Reexamination of the insurance-like effect of corporate social responsibility:

Empirical evidence from China-listed companies

Shou-Lin Yang Yung-Ming Shiu Tsung-Chi Liu

Article information:

To cite this document:

Shou-Lin Yang Yung-Ming Shiu Tsung-Chi Liu , (2015), "Reexamination of the insurance-like effect of corporate social responsibility", Chinese Management Studies, Vol. 9 Iss 3 pp. 295 - 310

Permanent link to this document:

<http://dx.doi.org/10.1108/CMS-03-2013-0047>

Downloaded on: 02 December 2015, At: 22:43 (PT)

References: this document contains references to 38 other documents.

To copy this document: permissions@emeraldinsight.com

The fulltext of this document has been downloaded 83 times since 2015*

Users who downloaded this article also downloaded:

Muhammad Aftab, Rubi Ahmad, Izlin Ismail, (2015), "Dynamics between currency and equity in Chinese markets", Chinese Management Studies, Vol. 9 Iss 3 pp. 333-354 <http://dx.doi.org/10.1108/CMS-07-2014-0120>

Lixin Zhou, (2014), "Social responsibility and employees' organizational identification in Chinese family firms: Influence of family ownership and family commitment", Chinese Management Studies, Vol. 8 Iss 4 pp. 683-703 <http://dx.doi.org/10.1108/CMS-11-2012-0159>

Peng Wu, Lei Gao, Tingting Gu, (2015), "Business strategy, market competition and earnings management: Evidence from China", Chinese Management Studies, Vol. 9 Iss 3 pp. 401-424 <http://dx.doi.org/10.1108/CMS-12-2014-0225>

Access to this document was granted through an Emerald subscription provided by emerald-srm:264686 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

Reexamination of the insurance-like effect of corporate social responsibility

Empirical evidence from China-listed companies

295

Shou-Lin Yang

*Department of Risk Management and Insurance,
National Chengchi University, Taipei, Taiwan*

Yung-Ming Shiu

*Department of Risk Management and Insurance,
National Chengchi University, Taipei, Taiwan and Risk and Insurance
Research Center, College of Commerce, National Chengchi University,
Taipei, Taiwan, and*

Tsung-Chi Liu

*Department of Business Administration, National Cheng Kung University,
Tainan, Taiwan*

Abstract

Purpose – The purpose of this paper is to re-examine the statement of Pelozo (2006) that enterprise corporate social responsibility (CSR) investment provides a protection efficacy similar to insurance.

Design/methodology/approach – This study uses the event study method and data from the 2008-2010 China listed company social responsibility report and the *Taiwan Economic Journal*.

Findings – The authors find that the insurance-like effect of CSR investment also exists in China. Both short- and long-term CSR investments of Chinese companies provide this efficacy to corporate stock prices. The authors also find diminishing marginal insurance-like effects in China market.

Originality/value – The CSR investment of firms in China can reduce company stock-price loss when negative events occur. The authors therefore obtain a better understanding of the value of enterprise CSR investment.

Keywords Corporate social responsibility, China listed firms, Insurance-like effect

Paper type Research paper

Introduction

The term of corporate social responsibility (CSR) first appeared in 1953. Since then, it has increasingly attracted the public attention[1]. In academics, numerous studies have examined the relationship between CSR activities and corporate financial performance (CFP); however, the results vary[2].

Pelozo (2006) presented a risk management viewpoint in which CSR accumulates positive moral capital for enterprise stakeholders. This positive moral capital acts as



insurance in abnormal times to reduce the effect of risk on a negative event. Thus, company expenditures on CSR investment are very much like insurance premiums that the company pays for reducing the loss of corporate market value due to negative events.

Godfrey *et al.* (2009) and Yang and Shiu (2011) followed the concept of Pelozo (2006). Both studies addressed whether enterprise CSR investment is efficacious in reducing company loss of stock prices during negative events. They used the event study method and data from the KLD Domini 400 social index dataset (the KLD dataset) and Compustat datasets. Their results support the viewpoint of Pelozo (2006) that when a negative event occurs, stock price fluctuation of companies with greater CSR investments is milder than that of companies with smaller CSR investments. This efficacy could be a strong incentive for corporate management to strategically invest in CSR activities.

Zijin Mining Group Co., Ltd., is the largest gold producer in China and publicly traded on the Shanghai Stock Exchange. This firm has been regarded by the public as a company which actively engages in CSR activities and financially performs very well. On July 12, 2010, it was faced with a serious pollution incident of toxic spill. This news release was expected to cause a steep decline in this company's stock price. Nevertheless, it was not the case. The firm's stock price returned to its original level before the incident in just two weeks. This is probably because this company had the image of a charitable firm and was forgiven by investors.

This study re-examines whether enterprise CSR investment in China is efficacious in reducing company loss of stock prices during negative events. We use the event study method to analyze changes in abnormal returns (ARs) on stock prices of CSR investment when a negative event occurs and includes the influence of long- and short-term CSR investment and competitor CSR investment. Vanhamme and Grobbsen (2009) proposed that companies with a long CSR track record could dismiss a crisis as a one-time incident. This study attempts to uncover the diminishing marginal insurance-like effect by observed changes in ARs during corporate negative events. To the best of our knowledge, previous studies are based on US listed companies (Godfrey *et al.*, 2009; Yang and Shiu, 2011), but societal CSR responses may not be similar in different countries because of diverse cultural environments, histories, political economies (Wong *et al.*, 2010) and stakeholder quality (Tokoro, 2007). Sharfman and Fernando (2008) suggested investigating developed markets, where the pressure for firms to meet stakeholder expectations is potentially stronger than emerging markets, and in developing markets such as China, where CSR awareness is comparatively low (Gao, 2009; Li and Zhang, 2010; Sharfman and Fernando, 2008). Therefore, CSR efficacy in the US market may not necessarily occur in other nation-state markets, particularly developing countries. Studies have shown the lack of empirical proof for the quasi-insurance efficacy of CSR investment in other countries.

China is the largest emerging market and the second largest economy worldwide. It is a relatively young country in establishing capital markets and injecting CSR. A dramatic difference also exists between the US and China in society and culture (Whitcomb *et al.*, 1998). The findings of Godfrey *et al.* (2009) and Yang and Shiu (2011) that CSR investment has insurance value are based on US listed companies.

Does this protection efficacy from enterprise CSR investment also exist in the Chinese market?

While our study does have similarities to that of [Yang and Shiu \(2011\)](#), there are, nevertheless, a number of major differences between the two. Firstly, we use data on China listed firms, whereas they used US listed companies. Unlike US developed market, China is an emerging economy and has developed a unique hybrid market where there is typically a less developed legal and political infrastructure ([Peng and Heath, 1996](#); [Marquis and Qian, 2014](#)). The attitude of investors of these two markets toward firm's CSR engagement could be different. Secondly, the prior study found that long-term CSR engagement has the insurance-like effect, while short-term CSR engagement does not. In contrast, in the present study, we find that both short- and long-term CSR engagements have the insurance-like effect.

Consistent with our expectations, both short- and long-term CSR engagements of Chinese firms have an insurance-like effect on firm stock prices when a negative event occurs, implying that CSR investment serves as a risk management tool to preserve corporate stockholder wealth. We also find that this insurance-like effect may reduce, as the number of negative events increases.

The remainder of this paper is organized as follows. The following section introduces related literature and develops hypotheses. Next, we discuss the research methodology. We then present the empirical results. The implications for management are provided in the penultimate section, while the last sections offers our concluding remarks.

Literature and hypotheses development

Literature

[Orlitzky et al. \(2003\)](#) argued that CSR investment is highly related to enterprise reputation. [Godfrey \(2005\)](#) presented a theoretical model to explain why corporate philanthropic activity generates a positive reputation and moral capital among firm stakeholders, providing the firm with insurance-like protection for its relationship-based intangible assets (relational wealth). He then argued that stakeholders have approbation toward corporate philanthropy, which subsequently forms firm moral capital, ultimately mitigating any adverse assessment by stakeholders of its bad actions to create a case for leniency in any punishment that may be considered.

[Peloza \(2006\)](#) noted that CSR investment acts as performance insurance during abnormal times, such as recessionary periods or certain unexpected firm-specific negative events. [Peloza \(2006\)](#) further indicated that using financial performance to evaluate CSR investment efficacy is inappropriate because CSR only works in abnormal times. He argued that the financial performance measures used in [Griffin and Mahon \(1997\)](#) and [Orlitzky et al. \(2003\)](#) do not capture CSR financial benefit[3]. When a negative event occurs, CSR investment may mitigate its adverse effect on company stock price. CSR investment then serves as insurance premium because it covers the loss of market value caused by negative events. However, if no negative event occurs, CSR expenses decrease company profits.

[Minor and Morgan \(2011\)](#) argued that CSR provides a contingent benefit. Expenditures on CSR activities are similar to premiums that reflect a cost to the firm. In a negative event, "the firm is insured to the extent that its past CSR activities tip the scale toward perceiving it as due to bad luck rather than bad management".

Vanhamme and Grobben (2009) found that compared to firms with a short history of CSR, those with a long history were better able to use CSR claims in their crisis communications to counter negative publicity. They further noted that consumer skepticism mediates the effectiveness of CSR history in countering the negative effect of a crisis. Their finding supports the conclusion of Pelozo (2006) that CSR has insurance value.

The empirical results of numerous studies support the viewpoint of Pelozo (2006). Godfrey *et al.* (2009) used the event study method and data from the KLD dataset and Compustat datasets. They found that in a negative event, institutional CSR provides an insurance-like benefit, whereas technical CSR does not [4]. Their finding supports CSR as a potential risk management tool to create value for shareholders in certain types of negative events from the risk management view. After controlling for individual firm characteristics and contemporaneous stock market returns, Minor and Morgan (2010) documented smaller decreases in stock prices following an adverse event when a firm engaged in CSR activities. They viewed CSR from two dimensions: “doing good” and “not doing harm”. They found that “not doing harm” plays a more important role than “doing good” in providing an insurance-like effect. Yang and Shiu (2011) used an event study and data from the Compustat and KLD dataset from 2000 through 2008 to examine whether CSR investment produces insurance-like effects on stock or bond prices when negative events occur. Their results are similar to the findings of Godfrey *et al.* (2009) that CSR investment provides an insurance-like effect on firm stock prices in a negative event. Yang and Shiu (2011) further showed that the effect exists only when firms engage in CSR on a long-term and continuous basis and that the effect decreases with the number of negative events. Based on this discussion, they found general support for the risk management view, that CSR is a potential risk management tool capable of creating value for shareholders in certain types of negative events.

Studies on the insurance-like effect of CSR in other country markets are scant. However, societal CSR responses may not be similar in different countries because of diverse cultural environments, histories, political economies (Wong *et al.*, 2010) and stakeholder quality (Tokoro, 2007), and in developed markets, where the pressure for firms to meet stakeholder expectations is potentially stronger than in emerging markets (Sharfman and Fernando, 2008). China is the largest developing market worldwide, but is also a comparatively young country in establishing capital market and injecting CSR. A dramatic difference also exists between the USA and China in society and culture (Whitcomb *et al.*, 1998). The studies of Godfrey *et al.* (2009) and Yang and Shiu (2011) are based on US listed companies to determine the existence of insurance-like effect on CSR. Whether this is true for other national markets, particularly for China as an emerging country, is the focus of this study.

If CSR efficacy exists in the Chinese market, we can use it as a strong incentive for entrepreneurs to invest in CSR in emerging markets. CSR investment of a firm may serve as a reference index and an important tool to enable investors to evaluate their investment risk in a developed country effectively, an indicator that could also be applied in developing countries.

Hypotheses development

Following Godfrey *et al.* (2009) and Yang and Shiu (2011), we re-examine Pelozo's (2006) assertion of the insurance-like effect of CSR engagement. This effect from CSR

initiatives generates a positive reputation and subsequent positive moral capital among stakeholders (Godfrey, 2005).

Although stakeholders in developed and emerging markets react differently to the CSR measures enterprises adopt, the literature supports that these measures are effective in the Chinese market. Therefore, we expect that this insurance-like effect to stakeholder wealth also exists in China. CSR investment provokes external stakeholder identification. Except for expanding the scale of short-term CSR investment (Nichols, 1990), CSR investment cannot produce an immediate effect and needs long-term efforts to show its influence (Cooper, 1997). If a firm wants good effects from its charity program, it should exist for a minimum of three-five years (Mullen, 1997). To achieve CSR investment effect, the influence of long-term input is important apart from short-term input. Thus, this study uses two null hypotheses to test for the effect of firms engaging in long-term and short-term CSR initiatives in the China market:

- H1. Short-term CSR investment in Chinese enterprises provides insurance-like effects on shareholder wealth.
- H2. Long-term CSR investment in Chinese enterprises provides insurance-like effects on shareholder wealth.

Vanhamme and Grobбен (2009) noted that firms with a long CSR history could “dismiss a crisis as a one-time incident”. Yang and Shiu (2011) also indicated that when external stakeholders have knowledge of firm CSR investment, that firm accrues moral capital to temper stakeholder reaction to any negative events. However, repeated negative events gradually deplete moral capital. This implies that CSR insurance-like effect diminishes with an increased number of negative events. Yang and Shiu (2011) found evidence of this CSR diminishing insurance-like effect in the US market. This study investigates whether this effect exists in China, the largest global developing market. Thus, we propose the following hypothesis:

- H3. The insurance-like effect of CSR investment by Chinese enterprises diminishes shareholder wealth with an increased number of negative events.

Methodology

Data sources

This study uses data on CSR investment from the 2008-2010 China listed company social responsibility report, issued and published by the Shanghai National Accounting Institute (SNAI). Stock price data were obtained from the *Taiwan Economic Journal (TEJ)*; this study used a total of 322 sample companies[5]. We search for the negative events of sample companies from the *TEJ* China event study analysis system. For industrial classification, this study divided 322 sample firms into 106 financial and 216 non-financial firms based on *TEJ* industry classification[6]. Table I presents the sample distribution of firms that are used in our analysis.

In total, 18 key words, presented in Table II, were used to search for negative events. We searched negative reports[7] on the 322 companies cited in the *TEJ* database from January 2009 to December 31, 2010. The first reported day of negative events was taken as the event start day for calculating ARs on stocks, and we deleted overlapping reports. The process obtained 356 negative events.

CMS 9,3	Industry names	Sample companies
	Agriculture, forestry, animal husbandry and fishery	3
	The mining industry	8
	Manufacturing	156
	Electricity, heat, gas and water production and supply industry	0
300	The construction industry	10
	Wholesale and retail trade	23
	Transportation, storage and postal service	4
	Hotels and catering	0
	Transmission of information, software and information technology services	12
	The financial sector	34
	The real estate industry	66
	Leasing and business services	3
	Scientific research and technological services	0
	Water, environment and public facilities management industry	3
	Resident services, repairs and other services	0
	Education	0
	Health and social work	0
	Culture, sport and recreation	0
	Integrated	0
Table I. Sample distribution	Total	322

Dimension of CSR	Keywords
Community	Controversy, dispute and local
Corporate governance	Compensation and transparency
Diversity	Discrimination and minority
Environment	Damage, fines, pollution and regulation
Human rights	Labor rights
Products	Product safety
Others	Allegation, fraud, lawsuits, litigation and scandal

Table II.
Keywords used in
searching for
negative events

Model specifications

Ball and Brown (1968) and Fama *et al.* (1969) first proposed the event study method to explore whether an event, such as announcing the dividend or profit, triggers abnormal changes in stock price, leading to ARs. AR is also termed excess return, prediction error and residual error. The AR concept is used to understand the correlation between stock price and specific events by using the statistical method to examine the AR ratio, that is whether the expected abnormal return ratio is zero. The null hypothesis is expressed as $H_0: E(R_i|event) - E(R_i) = 0$, where $E(R_i|event)$ and $E(R_i)$ represent the expected returns ratio when there is and there is not such an event to understand whether the event has influence on stock price.

A too-short estimation period can affect the model predictive power. Conversely, if the period is too long, it can result in structural changes of the data and, hence, an unstable model. Similar to Yang and Shiu (2011), we followed the suggestion of Peterson (1989) and used an estimation period of 120 days.

This study examined whether CSR investment has insurance-like effect on firm stock prices following a negative event related to firm operations in the China market. Therefore, stock price ARs and cumulative abnormal returns (CAR) during a negative event are the dependent variables in our analysis. Following the arguments in Fama and French (1993), we included market-to-book ratio and firm size[8] as our control variables. We also used long-term and short-term CSR investment and CSR investment amongst competitors as independent variables in the model.

Certain studies have noted that CSR investment effect only exists on a long-term, continuous basis (Nichols, 1990; Cooper, 1997; Mullen, 1997; Yang and Shiu, 2011). We divided CSR investment into long- and short-term groups, but because our data duration is only three years, we defined short-term CSR investment according to the rating of the social responsibility report of sample companies for the current year. Long-term CSR investment is the rating of the social responsibility report of sample companies for the current and previous years combined[9].

Baron (2001) noted that CSR investment within a competitive market changes the competitive balance of that market; Yang and Shiu (2011) further argued that the CSR efforts of competitors are likely to offset the effects of CSR investment by firms. We used the average CSR rating of all companies in the same industry to define CSR competitor investment and divided competitor CSR investment into long-term and short-term groups[10]. Short-term competitor CSR investment is the average rating of all companies in the same industry in the social responsibility report of Chinese listed companies for the current year. Long-term competitor CSR investment is the total of average ratings of all companies in the same industry in the social responsibility report of the Chinese listed companies for the current and previous years combined.

This study estimated the following regression to test whether CSR investment has insurance-like effects on firm stock prices following a negative event related to firm operations in the China market:

$$AR_i = \alpha_0 + \alpha_1 SIZE_{i,t} + \alpha_2 MB_{i,t} + \alpha_3 SCSRC_{i,t} + \alpha_4 CSCSRC_{i,t} + \alpha_5 LCSRC_{i,t} + \alpha_6 CLCSRC_{i,t} + \varepsilon_i \quad (1)$$

$$CAR_i = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 MB_{i,t} + \beta_3 SCSRC_{i,t} + \beta_4 CSCSRC_{i,t} + \beta_5 LCSRC_{i,t} + \beta_6 CLCSRC_{i,t} + e_i \quad (2)$$

In equations (1) and (2), AR_i represents the abnormal return of firm i on the given event day, CAR_i is the cumulative abnormal return of firm i on the given event day, $SIZE$ is the firm's net asset value, MB is the firm's market-to-book ratio in the year when the event occurs, $SCSRC_{i,t}$ and $LCSRC_{i,t}$ represent the firm's short-term and long-term CSR investment and $CSCSRC_{i,t}$ and $CLCSRC_{i,t}$ represent the competitor's short-term and long-term CSR investment.

Yang and Shiu (2011) documented a diminishing marginal insurance-like effect. Following their study, we included a dummy variable D in equations (3) and (4). This variable is set equal to one if negative events occur to the firm for more than once and zero otherwise:

$$AR_i = \alpha_0 + \alpha_1 SIZE_{i,t} + \alpha_2 MB_{i,t} + \alpha_3 SCSRC_{i,t} + \alpha_4 CSCSRC_{i,t} + \alpha_5 LCSRC_{i,t} + \alpha_6 CLCSRC_{i,t} + \alpha_7 D + \alpha_8 D \times SCSRC_{i,t} + \alpha_9 D \times CSCSRC_{i,t} + \alpha_{10} D \times LCARC_{i,t} + \alpha_{11} D \times CLCSRC_{i,t} + \varepsilon_i \quad (3)$$

$$CAR_i = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 MB_{i,t} + \beta_3 SCSRC_{i,t} + \beta_4 CSCSRC_{i,t} + \beta_5 LCSRC_{i,t} + \beta_6 CLCSRC_{i,t} + \beta_7 D + \beta_8 D \times SCSRC_{i,t} + \beta_9 D \times CSCSRC_{i,t} + \beta_{10} D \times LCARC_{i,t} + \beta_{11} D \times CLCSRC_{i,t} + e_i \quad (4)$$

Vanhamme and Grobten (2009) and Yang and Shiu (2011) argued that CSR provides insurance-like protection when negative events occur, but this protection may decrease with the number of negative events. We predicted that this diminishing marginal insurance-like effect exists in the China market, but the reduced effect with the number of negative events may vary, because the pressure for firms to meet stakeholder expectations in developed markets is potentially stronger than in emerging markets (Sharfman and Fernando, 2008).

Empirical results

Table III shows descriptive statistics and sample distribution of sample listed companies, and Table IV shows Pearson correlation coefficients of variables.

Table V shows that, during the event period, the -1st day to the 3rd day of the event day have a significant average AR. This means that the impact of negative events on the corporate share price before two days of event day is not significant. In addition, on the third day after the event day, the reaction also dissipates very quickly.

Table VI shows the results for equations (1) and (2). F-tests for the overall statistical goodness-of-fit are all significant at the 0.01 level, confirming that the fitted models are better than a null model without explanatory variables. The adjusted R² ranges from 0.0228 to 0.0386.

Table VI shows that in both AR and CAR overall models, both short-term and long-term CSR investments are significant at the 0.1 level. This seems to indicate that CSR investment acts like insurance in a negative event. However, we do not find significant effects of competitor' CSR investment.

We then divided sample companies into financial and non-financial firms. As shown in Table VI, the coefficients of short-term and long-term CSR investments for both types of firms remain significant at least at the 0.1 level for both AR and CAR models. Our findings suggest that short-term and long-term CSR investments in Chinese enterprises

Table III.
Descriptive statistics

Variable	Mean	Maximum	Minimum	Standard
Firm size	26.28	375.98	4.25	52.13
Market-to-book ratio	7.54	102.35	1.12	48.60
Short-term CSR engagement	49.86	86.50	32.00	21.49
Competitor's short-term CSR engagement	56.43	86.50	45.50	13.95
Long-term CSR engagement	73.20	126.50	51.25	30.61
Competitor's long-term CSR engagement	84.72	126.50	68.25	19.77

Variable	Firm size	Market-to-book ratio	Short-term CSR engagement	Competitor's short-term CSR engagement	Long-term CSR engagement	Competitor's long-term CSR engagement
Firm size	1					
Market-to-book ratio	-0.266***	1				
Short-term CSR engagement	0.351**	0.096	1			
Competitor's short-term CSR engagement	-0.072	-0.025	0.103*	1		
Long-term CSR engagement	0.297**	0.089	0.487***	-0.028	1	
Competitor's long-term CSR engagement	-0.055	-0.020	0.094*	0.465***	-0.024	1

Table IV.
Pearson correlation
coefficients

CMS
9,3

304

Table V.
The AR analysis regarding while companies face of negative events

Date	Average AR (%)	Significance	Maximum	Minimum
-5	0.0673		0.2254	-0.1021
-4	-0.1142		0.0915	-0.4230
-3	0.1655		0.5650	-0.2316
-2	-0.0872		0.2780	-0.3697
-1	-0.1031	*	0.1481	-0.4970
0	-0.6940	***	-0.2454	-1.7960
1	-0.1978	**	-0.0656	-0.8364
2	-0.0920	*	0.0450	-0.3120
3	-0.0571	*	0.0678	-0.1889
4	0.0968		0.3440	-0.1266
5	0.0254		0.4270	-0.2733

Notes: *, **, and *** denote significance at the 10, 5 and 1 per cent levels, respectively

Independent variable	Expected sign	Overall		Financial firms		Non-financial firms	
		Coefficient	SE	Coefficient	SE	Coefficient	SE
<i>Dependent variable = abnormal returns</i>							
Constant		-0.01691*	0.00972	-0.02476*	0.01422	-0.01329*	0.00761
Firm size	±	0.00536	0.00634	0.00396	0.00492	0.00659	0.00730
Market-to-book ratio	±	-0.00233	0.00195	-0.00350	0.00281	-0.00197	0.00163
Short-term CSR investment	+	0.00595*	0.00306	0.00764*	0.00397	0.00455*	0.00271
Competitor's short-term CSR investment	-	-0.00312	0.00281	-0.00386	0.00340	-0.00292	0.00264
Long-term CSR investment	+	0.00825*	0.00425	0.00969**	0.00494	0.00774*	0.00404
Competitor's long-term CSR investment	-	-0.00162	0.00241	-0.00213	0.00317	-0.00153	0.00226
Adjusted R ²		0.0325		0.0228		0.0386	
F-value		412.87 (0.0000)***		395.82 (0.0001)***		492.32 (0.0000)***	
<i>Dependent variable = cumulative abnormal returns</i>							
Constant		-0.02516*	0.01412	-0.03092*	0.01781	-0.02402*	0.01376
Firm size	±	0.00624	0.00741	0.00489	0.00577	0.00696	0.00821
Market-to-book ratio	±	-0.00219	0.00170	-0.00266	0.00215	-0.00205	0.00168
Short-term CSR investment	+	0.00643*	0.00351	0.00795*	0.00426	0.00586*	0.00340
Competitor's short-term CSR investment	-	-0.00376	0.00343	-0.00432	0.00393	-0.00337	0.00314
Long-term CSR investment	+	0.00935*	0.00479	0.00974*	0.00516	0.00914**	0.00465
Competitor's long-term CSR investment	-	-0.00198	0.00271	-0.00186	0.00265	-0.00209	0.00293
Adjusted R ²		0.0279		0.0236		0.0367	
F-value		387.62 (0.0001)***		312.90 (0.0001)***		423.68 (0.0000)***	

Table VI. Regression results

Notes: *, **, and *** denote statistical significance at the 10, 5 and 1 per cent levels, respectively; number of events = 356; *p*-value in parentheses

provide insurance-like effect on shareholder wealth. We again find no significant effects for competitor's short-term and long-term CSR investments.

Compared with Yang and Shiu (2011), they found that for the US firms, long-term CSR investments are significant in preserving shareholders' value, while short-term CSR investments are not. In their study, competitor long-term CSR investments are also significant, but competitor short-term CSR investments are not. Their findings together suggest that US shareholders value firms' (including their competitor's) long-term CSR investment more than short-term CSR investment. These results lend support to the notion of Vanhamme and Grobбен (2009) that shareholders are cynical about firms with only short CSR history and the argument of Godfrey (2005) that CSR investment must continue on a long-term and continuous basis.

However, our study shows that in China market, shareholders value short-term and long-term CSR investments. As suggested by Ye and Zhang (2011), firms in developed countries rely on private-controlled banks to finance their need of funds, whereas companies in China mostly relies on state-controlled banks. State-controlled banks are less concerned with economic profits and typically follow the strategic direction of government (Tian and Estrin 2007; Chen *et al.*, 2010). Ye and Zhang, (2011) suggested that state-controlled banks assign a larger weight to CSR information when they make loan decisions compared to private-controlled banks. The requirements on enterprise CSR investments in China market typically come from governmental departments[11]. Therefore, for stakeholders in the China market, enterprise CSR investments not only accumulate moral capital but also offer other company benefits, such as cheap loans. This enhances investor support in company stock price and produces insurance-like effects on shareholder wealth when negative events occur. The above discussion highlights one of the unique features of CSR investment in China that firms may obtain other benefits than accumulating moral capital. CSR investment in other countries may have other benefits depending on their respective institutional background such as legal and political infrastructure.

Table VII presents the results for diminishing marginal insurance-like effects in China market. Consistent with Yang and Shiu (2011), we found the estimated coefficient of the dummy variable D to be significantly negative for AR and CAR. The interaction coefficient between the dummy and long-term CSR investment is also negative and significant, suggesting that repetitive occurrence of negative events weakens the insurance-like effect of CSR.

Implications for management

Our findings have a number of implications for managers. Our first primary finding is that the insurance-like effect of both short- and long-term CSR engagement exists in China. The implication is that managers of listed firms should actively engage in CSR activities, even if they have not engaged any such activities before. Prior studies such as Godfrey (2005) argued that firms have to consistently engage in CSR activity so as to avoid the public forming an impression of opportunism. Vanhamme and Grobбен (2009) indicated that firms with a long history of CSR were better able to use CSR claims when they faced negative events. Yang and Shiu (2011) further found that it is long-term, rather than short-term, CSR engagement that has the insurance-like effect. However, it seems that China listed firms that engage in CSR

activities only for a short period of time can also use CSR claims in their crisis communications to counter negative publicity.

We also find that the insurance-like effect diminishes if negative events occur repeatedly. The implication of this finding is that although CSR engagement can serve as a strategic risk management tool, managers should be aware that the insurance-like effect certainly does not exist forever. Repeated occurrences of negative events will cause depletions in moral capital that are accumulated through the engagement of CSR activity. Therefore, this effect will decrease, as the number of negative events increases.

Conclusion

Pelozo (2006) indicated that CSR investment of an enterprise provides a protection efficacy similar to insurance. Godfrey *et al.* (2009) and Yang and Shiu (2011) determined the existence of this protection efficacy based on their empirical studies of US listed companies. Using event study methodology and data on China listed company for the 2008-2010 period, this study re-examines the statement of Pelozo (2006) that enterprise CSR investment produces insurance-like effects on shareholder wealth when negative events occur.

In line with Yang and Shiu (2011), we find that this insurance-like effect of long-term CSR investment exists in China. We also find diminishing marginal insurance-like effects in China market. It is worthwhile to note that we observe

Independent variable	Expected sign	Dependent variable = AR		Dependent variable = CAR	
		Coefficient	SE	Coefficient	SE
Constant		-0.01722*	0.00991	-0.02554*	0.01473
Firm size	±	0.00518	0.00610	0.00649	0.00775
Market-to-book ratio	±	-0.00255	0.00214	-0.00225	0.00189
Short-term CSR investment	+	0.00568*	0.00342	0.00652*	0.00390
Competitor's short-term CSR investment	-	-0.00304	0.00271	-0.00354	0.00328
Long-term CSR investment	+	0.00855**	0.00436	0.00924**	0.00466
Competitor's long-term CSR investment	-	-0.00156	0.00221	-0.00196	0.00284
Dummy	-	-0.02584**	0.01147	-0.03379**	0.01505
Dummy × short-term CSR investment	-	-0.00054**	0.00026	-0.00067**	0.00028
Dummy × competitor's short-term CSR investment	-	-0.00042	0.00031	-0.00044	0.00041
Dummy × long-term CSR investment	-	-0.00064***	0.00022	-0.00061***	0.00025
Dummy × competitor's long-term CSR investment	-	-0.00022	0.00023	-0.00034	0.00032
Adjusted R ²		0.0576		0.0429	
F-value		447.32 (0.0001)***		395.95 (0.0001)***	

Table VII. Testing diminishing marginal insurance-like effect results

Notes: *, **, and *** denote statistical significance at the 10, 5 and 1 per cent levels, respectively; number of events = 356; *p*-value in parentheses

results that differ from their study, which we point to the effect of the specific institutional framework in operation in China over the period of the study. In particular, we document that short-term CSR investment also has an insurance-like effect. We attribute this to the fact that Chinese firms generally finance their funding from state-owned banks which emphasize more than their private counterparts on CSR when making loan decisions.

Notes

1. CSR definitions vary in the literature. Mackey *et al.* (2007) defined CSR as voluntary corporate actions designed to improve social conditions. Performance can also be defined as corporate actions not required by law that attempt to further a certain social good and extend the explicit transactional interests of the firm (McWilliams and Siegel, 2000).
2. The result of empirical studies on the relation between corporate social performance (CSP) and CFP is mixed. Beurden and Gosling (2008) and Margolis and Walsh (2003) documented a positive relationship between CSP and CFP, and the 13 studies reviewed by Ullmann (1985) do not indicate clear evidence of a positive CSP/CFP link. Boyle *et al.* (1997), Brammer *et al.* (2006) and Wright and Ferris (1997) suggested a negative relationship between CSP and CFP.
3. The financial performance that Griffin and Mahon (1997) used to measure corresponds to that outlined in incremental financial gain as profitability, asset utilization, growth, liquidity and risk/market measures. Orlitzky *et al.* (2003) classified financial performance into three major types of measures as market-based (investor returns), accounting-based (accounting returns) and perceptual measures (e.g. surveys capturing subjective estimates of a firm's financial position). Pelozo (2006) believed that none of these measures capture the financial benefit received from the mitigation of some negative event.
4. Mattingly and Berman (2006) differentiated CSR between "technical-CSR" and "institutional-CSR", suggesting that the former targeted primary stakeholders of the firm, whereas the latter targeted secondary stakeholders.
5. In the *Chinese listed company social responsibility report* published by SNAI, the number of companies was 1,087 in 2008, 1,257 in 2009 and 1,273 in 2010. This study chose 322 sample companies for the 2008-2010 period.
6. We divided firms into financial firms if their *TEJ* industry classification core is 28, 30, 31, whereas others were divided into non-financial firms.
7. Negative words such as *violate*, *interfere*, *infringe*, *damage* and *injure* emerged in these reports.
8. Firm size is proxied by net assets.
9. Yang and Shiu (2011) proxied CSR engagement among competitors by the aggregate of overall CSR engagement of the top three firms (in terms of net assets) in a given year. If the firm is one of the top three firms in the sector under examination, then it is excluded and replaced by the fourth firm for calculating the CSR engagement of the firm's competitors.
10. Yang and Shiu (2011) proxied CSR engagement among competitors by the aggregate of overall CSR engagement of the top three firms (in terms of net assets) in a given year. If the firm is one of the top three firms in the sector under examination, then it is excluded and replaced by the fourth firm for calculating the CSR engagement of the firm's competitors.

11. For example, Shenzhen Municipal People's Government issued Shenzhen CSR evaluation standards in 2007 to regulate listed company in Shenzhen. In May 2008, Shanghai Stock Exchange issued formal files to listed companies requiring them disclose their CSR information and practice.

References

- Ball, R. and Brown, P. (1968), "An empirical evaluation of accounting income numbers", *Journal of Accounting Research*, Vol. 6 No. 2, pp. 159-177.
- Baron, D. (2001), "Private politics, corporate social responsibility and integrated strategy", *Journal of Economics and Management Strategy*, Vol. 10 No. 1, pp. 7-45.
- Beurden, P.V. and Gossling, T. (2008), "The worth of values: a literature review on the relation between corporate social and financial performance", *Journal of Business Ethics*, Vol. 82 No. 2, pp. 407-424.
- Boyle, E.J., Higgins, M.M. and Rhee, G.S. (1997), "Stock market reaction to ethical initiatives of defense contractors: theory and evidence", *Critical Perspectives on Accounting*, Vol. 8 No. 6, pp. 541-561.
- Brammer, S., Brooks, C. and Pavelin, S. (2006), "Corporate social performance and stock returns: UK evidence from disaggregate measures", *Financial Management*, Vol. 35 No. 3, pp. 97-116.
- Chen, H., Chen, J.Z., Lobo, G.J. and Wang, Y. (2010), "Association between borrower and lender state ownership and accounting conservatism", *Journal of Accounting Research*, Vol. 48 No. 5, pp. 973-1014.
- Cooper, C. (1997), "Give and thou shall receive", *Sales and Marketing Management*, Vol. 149 No. 3, pp. 75-76.
- Fama, E.F., Fisher, L., Jensen, M. and Roll, R. (1969), "The adjustment of stock prices to new information", *International Economic Review*, Vol. 10 No. 1, pp. 1-21.
- Fama, E.F. and French, K.R. (1993), "Common risk factors in the returns on stocks and bonds", *Journal of Financial Economic*, Vol. 33 No. 1, pp. 3-56.
- Gao, Y. (2009), "Corporate social performance in China: evidence from large companies", *Journal of Business Ethics*, Vol. 89 No. 1, pp. 23-35.
- Godfrey, P.C. (2005), "The relationship between corporate philanthropy and shareholder wealth: a risk management perspective", *Academy of Management Review*, Vol. 30 No. 4, pp. 777-798.
- Godfrey, P.C., Merrill, C.B. and Hansen, J.M. (2009), "The relationship between corporate social responsibility and shareholder value: an empirical test of the risk management hypothesis", *Strategic Management Journal*, Vol. 30 No. 4, pp. 425-445.
- Griffin, J. and Mahon, J. (1997), "The corporate social performance and corporate financial performance debate: twenty-five years of incomparable research", *Business and Society*, Vol. 36 No. 1, pp. 5-31.
- Li, W. and Zhang, R. (2010), "Corporate social responsibility, ownership structure, and political interference: evidence from China", *Journal of Business Ethics*, Vol. 96 No. 4, pp. 631-645.
- McWilliams, A. and Siegal, D. (1997), "Event Studies in Management Research: Theoretical and Empirical Issues", *Academy of Management Journal*, Vol. 40 No. 3, pp. 626-657.

- Mackey, A., Mackey, T.B. and Barney, J.B. (2007), "Corporate social responsibility and firm performance: investor preferences and corporate strategies", *The Academy of Management Review*, Vol. 32 No. 3, pp. 817-835.
- Margolis, J.D. and Walsh, J.P. (2003), "Misery loves companies: rethinking social initiatives by business", *Administrative Science Quarterly*, Vol. 48 No. 2, pp. 268-305.
- Marquis, C. and Qian, C. (2014), "Corporate social responsibility in China: symbol or substance?", *Organization Science*, Vol. 25 No. 1, pp. 127-148.
- Mattingly, J.E. and Berman, S. (2006), "Measurement of corporate social action: discovering taxonomy in the Kinder Lydenburg Domini ratings data", *Business and Society*, Vol. 45 No. 1, pp. 20-46.
- Minor, D.B. and Morgan, J. (2010), "CSR as reputation insurance: primum non nocere", *California Management Review*, Vol. 53 No. 3, pp. 40-59.
- Mullen, J. (1997), "Performance-based corporate philanthropy: how 'giving smart' can further corporate goals", *Public Relations Quarterly*, Vol. 42 No. 2, pp. 42-48.
- Nichols, D. (1990), "Promotion the cause", *Incentive*, Vol. 164 No. 8, pp. 28-31.
- Orlitzky, M., Schmidt, F.L. and Rynes, S.L. (2003), "Corporate social and financial performance: a meta-analysis", *Organization Studies*, Vol. 24 No. 3, pp. 403-441.
- Pelozo, J. (2006), "Using corporate social responsibility as insurance for financial performance", *California Management Review*, Vol. 48 No. 2, pp. 52-72.
- Peng, M.W. and Heath, P.S. (1996), "The growth of the firm in planned economies in transition: institutions, organizations, and strategic choice", *Academy Management Review*, Vol. 21 No. 2, pp. 492-528.
- Peterson, P.P. (1989), "Event study: a review of issues and methodology", *Quarterly Journal of Business and Economics*, Vol. 28 No. 3, pp. 36-66.
- Sharfman, M.P. and Fernando, C.S. (2008), "Environmental risk management and the cost of capital", *Strategic Management Journal*, Vol. 29 No. 6, pp. 569-592.
- Tian, L. and Estrin, S. (2007), "Debt financing, soft budget constraints, and government ownership", *Economics of Transition*, Vol. 15 No. 3, pp. 461-481.
- Tokoro, N. (2007), "Stakeholders and corporate social responsibility (CSR): a new perspective on the structure of relationships", *Asian Business & Management*, Vol. 6 No. 2, pp. 143-162.
- Ullmann, A.A. (1985), "Data in search of a theory: a critical examination of the relationships among social performance, social disclosure, and economic performance of US firms", *Academy of Management Review*, Vol. 10 No. 3, pp. 540-557.
- Vanhamme, J. and Grobbsen, B. (2009), "Too good to be true!: the effectiveness of CSR history in countering negative publicity", *Journal of Business Ethics*, Vol. 85 No. 2, pp. 273-283.
- Whitcomb, L.L., Erdener, C.B. and Li, C. (1998), "Business ethical values in China and the US", *Journal of Business Ethics*, Vol. 17 No. 8, pp. 839-852.
- Wong, A., Long, F. and Elankumaran, S. (2010), "Business students perception of corporate social responsibility: the United States, China, and India", *Corporate Social Responsibility and Environmental Management*, Vol. 17 No. 5, pp. 299-310.
- Wright, P. and Ferris, S.P. (1997), "Agency conflict and corporate strategy: the effect of divestment on corporate value", *Strategic Management Journal*, Vol. 18 No. 1, pp. 77-83.

Yang, S.L. and Shiu, Y.M. (2011), "Insurance-like effects of corporate social responsibility stockholders and bondholders Wealth", *The 2011 Decision Sciences Institute Conference*, Boston, MA, 19-22 November.

Ye, K. and Zhang, R. (2011), "Do lenders value corporate social responsibility? Evidence from China", *Journal of Business Ethics*, Vol. 104 No. 2, pp. 197-206.

Further reading

Blacconiere, W.G. and Patten, D.M. (1994), "Environmental disclosures, regulatory costs and changes in firm value", *Journal of Accounting and Economics*, Vol. 18 No. 3, pp. 357-377.

Brammer, S. and Millington, A. (2008), "Does it pay to be different? An analysis of the relationship between corporate social and financial performance", *Strategic Management Journal*, Vol. 29 No. 12, pp. 1325-1343.

Corresponding author

Yung-Ming Shiu can be contacted at: yungming@nccu.edu.tw